Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS:

Claims 1 - 15 (cancelled).

16. (currently amended) A solid support comprising a substrate and a layer deposited on said substrate, said layer being a layer of at least one material selected from the group consisting of HfO_2, ~~TiO_2,~~ and Ta_2O_5, ~~and ZrO_2~~, said layer providing a surface for immobilizing oligonucleotides, said surface having undergone a treatment to make it hydrophilic.

17. (previously presented) The solid support according to claim 16, wherein said layer has a thickness of between a few nonometers and one micrometer.

18. (previously presented) The solid support according to claim 16, wherein said substrate is selected from the group consisting of glass, plastic and semiconductor substrates.

19. (cancelled).

20. (previously presented) The solid support according to claim 16, wherein said material is a mixture containing SiO_2.

21. (cancelled).

22. (currently amended) The solid support according to claim ~~21~~ 16, wherein said support is formed of silicon.

23. (previously presented) A biochip comprising a solid support for immobilizing oligonucleotides according to claim 16.

24. (currently amended) A method for producing a solid support having a surface for immobilizing oligonucleotides, the method comprising the steps of:

a) providing a substrate;

b) depositing on said substrate a layer of at least one material selected from the group consisting of HfO_2~~, TiO_2,~~ and Ta_2O_5~~, and ZrO_2~~; and

c) treating a free surface of said layer to make it hydrophilic to provide said surface for immobilizing oligonucleotides.

25. (previously presented) The method according to claim 24, wherein said layer has a thickness of between a few nonometers and one micrometer.

26. (previously presented) The method according to claim 24, wherein said substrate is selected from the group consisting of glass, plastic and seimiconductor substrates.

27. (previously presented) The method according to claim 24, wherein said layer contains SiO_2.

28. (previously presented) The method according to claim 24, wherein said depositing step includes a deposition method selected from the group consisting of vacuum evaporation, ion beam sputtering, radio-frequency sputtering, magnetron sputtering, atom layer chemical vapor deposition (ALCVD) and sol-gel deposition.

29. (previously presented) The method according to claim 24, wherein step (c) includes cleaning said layer with a base solution or an acid solution.

30. (previously presented) The method according to claim 24, further including the step of structuring the free surface of said layer.

31. (previously presented) The method according to claim 30, wherein said structuring step includes a technique selected from the group consisting of dry etching, wet etching and "lift-off".